										ī
12 48	28 96	44	60 192	76 240	92 288	108	124 384	140 432	156 480	172 528
CTG	S TCA	Q CAG	L CTG	DGAT	E	r CrG	E	H	င TGC	A GCC
CCT	L	M ATG	P CCA	e Gag	G GGA	s TCC	CAA	S AGT	A GCC	₽ GCC
r CTC	L	ж С G G	DGAC	e Gag	P CCT	ტ ენნ	PCCT	Q CAG	PCCA	L
W TGG	L CTG	P CCC	D GAT	R Aga	L	E	D GAT	DGAC	s TCC	Q CAG
CCC	CAA	L TTG	E	P CCC	D GAT	E GAA	G GGA	D GAT	V GTG	P CCC
SAGC	V GTG	r Agg	ი გმმ	S	e Gag	E GAA	PCCT	ტ მმმ	R CGG	R CGC
CCC	TACT	Q CAG	S TCT	D GAT	e Gag	S TCA	A GCT	GAA	P CCC	IATC
င TGC	r CTC	P CCC	S TCT	e Gag	GG A	AAA	e Gag	AAA	W TGG	DGAT
L CTG	ල්ල	H CAT	ဗ္ဗဗ္ဗ	E GAA	PCCT	PCCT	V GTT	D GAC	CCC	V GTG
CCC	PCCA	o Geo	6 66A	S AGT	L	K AAG	T ACT	R AGG	P	P
A GCT	A GCT	P CCT	G G G A	P CCC	DGAT	V GTT	PCCT	H	D GAC	S
M ATG	PCCT	M ATG	L TTG	L CTG	e Gag	GAA	L CTA	A GCC	9 990	Q CAG
၁၅၁	A GCC	L CTG	P	D GAT	e Gag	PCCT	D GAT	N AAT	G GGA	F
AGC	P	L	S	e Gag	GGA	L CTA	E	N AAT	Y TAT	R CGC
GTC	IATC	L CTG	D GAT	e Gag	PCCC	D GAT	L TTA	Q CAG	R CGC	ဗ္ဗဗ္
ACA	$_{ m TTG}$	L CTG	e Gag	ဗ္ဗဇ္ဗင	PCCA	e Gag	K AAG	P	W TGG	A GCG
니 ન	13 49	29	45 145	61 193	77	93 289	109 337	125 385	141 433	157 481

FIG._ 1A

2/13

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<u>_</u> _	1522					E	TAA	TTA	TAT	AAA	AAT	TAA	TTT	ATT	GAA	CAA	TGC	1489
	1488	AAC	TLL	CCT	CTT	CCA	ATG	ATT	CTC	CTG	GTC	CCT	TGT	AAC	GGT	၁၁၅	GGA	1441
	1440	999	TGA	ATC	၁၅၅	AGA	ညည	CCA	AAG	GAG	TGT	GAA	GGA	CTT	GAT	CTG	AGG	1393
	460 1392	* TAG	₽ GCC	G GGA	TACT	EGAG	₽ GCC	V GTA	e Gag	A GCA	P CCA	ಸ ೧ <mark></mark> ೧೮	Y TAC	S AGC	V GTG	G GGT	ტ ტტტ	445 1345
	444	K AAA	T ACC	GGA	R AGG	R AGA	H	Q CAG	R AGG	r Aga	MATG	Q CAG	v GTG	L	F	₽ GCG	V GTC	429 1297
	428 1296	S AGC	T ACC	V GTC	A GCT	F TTT	L	CTC	ဗ္ဗဗ္ဗ	F TTT	V GTT	L CTG	₽	L	I ATC	D GAC	G GGT	413 1249
	412 1248	A GCT	A GCT	L CTG	C TGC	s TCC	N AAT	L CTG	Q CAG	V GTC	PCCA	E GAG	A GCT	A GCT	R CGG	PCCT	S AGT	397 1201
	396 1200	S AGC	D GAC	V GTG	GG A	A GCT	PCCT	F	S	₽	E GAG	I ATT	v GTG	R CGA	ი გგე	N AAT	L TTG	381 1153
	380 1152	PCCT	Q CAG	T ACG	A GCG	R CGA	F TTC	NAAC	L	Q CAG	LCTA	R CGG	S TCT	DGAC	G GGT	PCCT	G G A	365 1105
	364 1104	W TGG	L CTG	T ACC	D GAC	S TCT	CTC	T ACC	H	L	Q CAG	K AAG	A GCT	SAGT	L CTG	M ATG	V GTG	349 1057

FIG._1

cct?gtttt F/G._2A tctcgatctc agctggtaac taacacagtg ctacctgagg gtgactgcgg aacaattaag tttcttgaca cagatgcttg cagggacaca tgttcacttg ctgtgagaaa aaaaaaaa aagccaagta gatttgatct atteteeece actaccttct tggggattaa gctaattttg ttgccactag cctatttctc ttggagttt tgcccaggct tcacgccatt gcccggctaa gtgtgagcca tttgagtttg atttgaagag cacagtaata agagaggtct aggaatgttt ccaaaagagg tgagctgtgt agctgctatg ccttacatgc ttctctcttc tgaccttgga ggtgtgtgtc ctctgaaaca ctttgttaaa gctattggta catcctcaaa gcttgaacct tatttttgta cctccacact gaccctaagc aatataattt gcatctgtca cctcccgagt ccgccaccat gccagaatgg gggattacag atgtcttgta tataggttct ctcattagcc caagaaattg agaaactccc ttgacagcct cttttccag tccatatttc cctcagtgac ctcaagtaat cagagacctt aaatcccct aatacaaaaa aagtctacct tacaagaaat gcaagatgtg ttaaaaaaa taaatgaata atcacagctc gattagtcat gttacatgaa gcctttggct tgatagtttt gcttacctaa tatttaatac acggagtct gcaagctcca ctacaggcgc caccgtgtta aagtaaaat ctgacggtca cattacattt aaaaggttct gaaaaaagt tctgacacta tttgtgagc tctgcatgtt ccacgettte ctctcagtt acctgtgct ctaggaaaac tgaccctgcc tgagtttaca ccaaagttct ggcttttcct gaaacttgtt aatccctaat ttcaggtgaa tcagaattgg ggtcctctgc tagttattga gacggccatc ggattcacta gtaggaatga cagttgggta aatcttgcta ttttttgag gagtctttta taatgtggtg gctgtatata tatgctaaag acatataatg catcattggc gaatgtgaaa cttaccccca taagggcggt agtcatcacc ctattgtcca aaaaataaat acatttaggg ttcagtaatt aatatgggca teggeteact gtagctggga gacggggttt cctcggcctc gcagtccttt cacttggctt atcataagtg tatagacagg gactcgtgac ttaaatggat cttccctcca ttatcaataa gacttacgaa ttcaaaacca gtcattcttt tacgttccaa atgcactgtg gtactcagtt ctttatctgt tgtttgtttg tggtgccatc agcctcccga ttttggtaga cttttagctt taccacttgg agagggatga ctctgacatt ttaagcaaga tcaagtgaga tatgctttta tattggatat ctcaattctg taggaaataa gctcgttaag aaggccgcag gccatgagtt acctctaagt gatccacccg ccaattttt ttccttttat gctacttttt tcattgttgg cttgtttgta catatctgca ttcctgcctc tctgagattc actatttttc ggttcataat tttatctgac cacccaagaa ttgcttttga tagttaatgg ttttttgtat ctgacttcgt ccgcacctgg gcatgcatat catgttatat gcttgtgttt tgggaattgt ttccacttgg ccactcaggg aaggcagcat aacactgcgg aaaaaaaa aatgatcata ctttatcatt aagttctaat tttaaacttt gggtaggtag ttgtactggc tttgtttgtt ggagtagcag tatggtacat ggatcctgtt 1141 1321 1441 1741 1801 1861 481 601 781 841 901 961 1021 1081 1201 1261 1381 1501 561 1621 1681 241 301 361 541 661 721 421

aggtgaggca tgtctttatt ggattatatc aaggtggaag cttccctcaa	yctcayyyca tgctctgtca ccattacacc cgggctggtc ggaccgtgtc gtactaaata attaacaaag gagggagagat ttgagcagga		Ggtaagtggt
ttgctctgag tcaaggatta atcccttaaa ttgggtggcc attcatctct	graagetect gacagggtet gcctcaaccg caggcacatg ccatgttgcc ccaaaatgag acctatggta acctatggta gctagagtat gaaggaagtt	gagcccctct cattacttaa tggtggagtc ccccagctcc tgaggctggc gccttgggtt cctcactcca tgtgagactt aggcttgctc tgtgctggga TCTGTTGATC AGGCTCTTCT AGGCTCTTCT AGAGGAGGAT	GGACAAAGAA
aagtatgatc tataatcctt caataatata tcccagcact ctaaagcaga	tcactagatt tcttttttga gctcactgca gctgggacta cagggtttgg cctcagcctc ccagtgctgg tttcagggag gtttaatttg gcaaggtttt		ATGCCCACAG
tgttaaaaaa agatcaataa ttaacagaat acacctgtaa atattatctt	ttgccctcac tttttgtttt tacagtctca ctcctgagta atccaccca agtccatagc gtaaatagca aaaaatagca ggtctcttgg	aatataggtt aagtttgtct ctacctcttt cagccagagg ggaagcaggc cctgcatagt tgcctgtgca gggaacaggc cgtacagcct cgtacagcc cgtacagcc cgtacagcc cgtacagcc cgtacagcc cgtacagcc cgtacagcc cgtacagcc cgtacagcc	CCCCAGAATA
cttcttactg tgatctttaa taatttgtct gcagtggctc gcctacttct	ttgacaggge tttgtttttg agtgcaatgg ccatttcagc ttttgtattt ggactcaagc ccatgtccct gaatgcaata gtttggagaa aagatggaaa	י שווא איט ט ט ט ט מ ב שוו שוו שוו שוו שוו שוו שוו שוו שוו ש	TCCTCAAGAA
aattt taatc taaag ctggg aaatt	atgatga gtagcgt ccaggcc accatca ggctaat cgaactc tattcat atattta gtagtaaa gtaggag	traatg gcttt tcccc ttgagc ttctg ggtggc ctctc cccc ccc	CTCCTGGAGA
8 4 0 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2	40000840908409084	ე ნ

TTGGGGCGCC TCCCGGGCGG TGGAGgtgag GGGCTCGGAG tgtccttttc aagacaatga ttgggtgcgg ctcctgtaag taagcttgag ccctacage ccctcacct tatactctcc GCTTCCAGTC ggaaccgtcg gagaagggc cttccagagg gtggagagaa agggggaggc cagaggaaaa agcttgggag tcttaggcta tggcttcttg agggatgagt gactcaggac ttttgttgcc cgggttcaag gccaccacgc aggctggtct ggattatagg CCCTGGAACT GCCACAGTGg acttgcctct acccaqccta CGCAACAATG TGGCTCTGGG CAGGTCGTCC cctaccctcg TGACGAGGCC attggggctc accgtcccac TGCGCGGCC GCCTGCGCC cggactggcc ATTGGCGCTA ctgtggatct acttcctcac cgcagggaag gggccggctc atgggagaga aatgtgcaga agaaaaggaa agtcatctca tagagaacg actcatttgg aaactttcac ctccacctcc acaggcatgc catgttggtc caaagtgctg ggtgttgagt acccgtaatg ccctcccata agggacagat tacaaggcag tacagaccct cacagaagcc tggtgtactc ggggtttcgc actggaataa ggcatttgtt ccaggaaggg GACCAGAGTC gaacccagct Sacgasas taggcgtcag GTCCCCAGCC CTTCTGCCCG ACTGCGCCTG tggggcgggg ctaccgggcg GGGCTAGAGA TGGGGGGCTG GAGgtgagcg gtggccctct TTGCCAGAGT ttcatgactc ttggagacca tttttgagac cactcacttt acccagctgc ctgtactccc ggaggtagaa agctggtaga acacagcagg tcactgcaac agctgcgatt gctggatgag tgagagaaa tgaggggaag gacttgggga CGCTCCCAGA CCTGCCTCCT GCATCTGCAC ggccagagac AGCACCGCCT tgtttggccc gcccgcttaa tacagGGGAT GGCCCGGGT AGCTCGCCGC tgggctggcc TTTCCCTGCC tttttttt cgatctcggc ctgaagcagc gttttggtcg cccaatctgg gggcgtccca gttcctgacc ggagggaga cccactctc agagaggtga gaactgcaga tcagagagtt aagcaagaag ggaagaaggg gggaaagggg aaaggaaaga ctagccaagt tagtagagac atccaaccac ttccaggagg CTCTGCAGCT agcgcctggc gtaggattgc ttgcacctg ttgtgacatc tttcattta gctgcacaga cactggtccc ggttccctaa GACCCCCCT ATCCGCCCC CAGCTCCCGC tccccgccga gcccgggggt TGCAACTGAC AAGGCCACCG ggcggacggg GGTTCACCTC actcagggaa agaaggagag taccagagac ttgagaccta actcacttt tttgtattt atctcaggtg aaagggatga aagaaggaag tgcaatggcg gcctcagcct caaatccagg atatccccat gtgcaaaagg caggaatttg CCCGGTGGAT tgaggggtc tctcctgtgc cggttcatcc cgtccctgaa CCTGGGCTTC ccctacgcag SAGTACCGGG CACACTGTGG aaaggagcgg agATCCACGT ggctctgttc caatgaggaa gggagaga tgaagtgccc cgaactcctg cgtgagccac gcatctgcgt acacccacc ttctacccg cacccagGC cgcagtgcct tcccatacca actcccaagc caggctggag ccggctaatt ttgcaagctg catcaatctc aataaaagg tggagaagag aaataggtgg gtgaagtggg tgattctcct 4981 5041 5221 5281 5341 5401 5461 5521 5641 4141 4441 561 4681 4741 861 4921 5101 5161 5581 5701 5761 5881 4081 4201 4261 4321 4381 4501 621 4801

cc **FIG. 2C**

aacagagcga cccagGAGGG gcctgtaatc taaagtgggc ttggttcgca acactgtctc atgttccctc gttccggcct TCGCTGAGGA aatcaccctt attgaagcat ccgcaaacgg gaccatcctg gcgtggtggc gaacccggga aaagaaagg tatttaggga tgagatgcct tctctgtcgc ccgggttcaa caccatgccc aggctggtct attacaagtg tcatgatgtt gaagtggcat gaggtgacac gcagtgagtg gaccccatcc gttcatttaa ggtccttgcc aaggacatag agcacaaagt caccccctac actcttaggt atgtcattcc acacagttac aagagatcaa agaatggcat cagcctgggc tgaagctgta tttgacagtc catgttggtc caaagtgctg ccagccacac ataaataaaa ggtgaatgca tacggaggca agtatcctag accaagcttg ttacaatttt ccccttcat TTGGAAGAAA gttcataaag tgcaggaggg ggtggctcac aaatagccag gacacatagg cactggtaga gaatatggcc gaagggatgg cttccgcctc aggtgtgtgc taagaggag agatcctgga tggagccaga cgcactgtt cactgcactc GCTGTCTCGC tcacgaggtc aaatacgaaa ctgaggcagg aaaccagtcc cataggattt gcaacaacca actatgggaa ctgtcttaca ctgtggccta aagctgacag cgccgggcac TGGAGgtacc gactctatcg aactcattca acaaggattc tgacatgaca caaagactca gtcactgcaa ctggggttac agggtttcac ctcagcctac ttctttaatg atatgttcat aaaaagaata gaatcatgaa ggggagtatg ctgagagcct ctccctccag ttaaagcctt ccagtaaagg tatttattt gcacgggtca ttgtcattga tgaaataata ATGAGCAGTT ccactaatct aataaccatg aagcaaaac ggcaggtgga tctctactaa actcgggagg gagatcgtgc GCCGCCTTTC tttagtagac atccgcctga cactcactga tagcatgtca caaaataaga gccaaacaca acaacaaaa atgggagagg atgcactcat ccagcccca tgggggaggc gaggtgacac tagaggaggc gtgatcttgg tcctgagtag ggtttcctgt tggagatggg gatactacag ctggctgaca acagaatgtg ttatttatt AACAGTGCCT cacctgaaaa aacaacagca gagctgagga tgaaacccca aatcccagct gcagtgagcc GGCCGTGTTG gcctcaagtg tgcccagcca gcctccatca ggttcataag gtgtatatat cgtcagaagg tctctccagc acatagagtt cctggatac gttggtctgg ggtctgaggc tcatcttgat attgaaaacc gggaggccaa cccatcccat actcaggccc gaaccaggca ccacagccag ggtcacagag tgcagaggaa acaccatgat ctcactcact gtgcagtggt tgcctcagct tttttgtatt tctctccctc gagccagcgc ccaggctgga gggattctcc agctaatttt cttaacatta gtcaggacct caacacaag agactgcaaa cagcaagagt taaaaaaaa agcattctca tcagccatgg CCCGGAAGAA AGgtcagttt tggagcttca ctgcctacag ccagcactt gccaacatgg gggtgcctgt ggcagaagtt CGGGAGGCCT cagcaagctc aggtgttcat gctaggttca caaactcctg tgagccaccg tcagagaaat taccagattt cacccactgt tctaaggagc taaagatggt atggctacat 7141 7321 7441 7501 6841 6961 7021 7081 7201 7261 7381 7561 7621 7681 7741 6301 6601 6661 6721 6781 6901 6361 6541 7801 6001 6061 6121 6181 6241 6421 6481

FIG._2D

FIG	gtccccagag	ttcccccatt	atggtgggga	gaggcagatc	aatatta	ccccaac	84
i	tgcagaacag	tctccttttc	ctgctc	tcaggaccgc	cag	attca	78
	ctcctcagca	g	ъ	gccctcctc	gtga	CCTGGCTG	9721
	CTGAATTCCT	tccagTCCAG	cetttttete	tctcacatct	Ü	gtggt	99
	agtgtctgtc	tgtgtg	U	agtagtccct	U	gtctg	9
	Ggtacagctt	ပ္ပ	GTCCTCGGGC	GTGGACAGCA	ပ္ပ	GGCCT	54
	CGAGTGATTG	TTTGAATGGG	CGACGCAGCC	AACTTCCGAG	GCT	GTGACTCTCG	48
	TGGGGACCTG	TGACACCCTG	ACACCCTCTC	ccctagCTCC	CCa	ccaca	42
	catgaaccca	cctgtcatgc	accettgttt	ctggcctggg	tgg	tgag	36
	agggtggagc	caggagctgg	atggggaata	aagaggctgg	ap	ttattt	30
	ggatacattt	accatcttta	accactgcct	ctatgatccc	tgcagt	b	24
	ttgattccag	ggaagatcgc	ggctgaggtg	tactcaagga	agt	atgcg	18
	gggcatggtg	aaaaatagcc	caacaaaacc	aaaaaaccc	at	tgtg	12
	ggggcaacat	aagacaaggc	ccaggagttc	tggtttgagc	ggga	gaggctg	90
	ccaccacgtt	gcctataatc	tgtggcttac	ggctgggctc	aagaaatcaa	ggagaag	00
	agatgagaaa	atgtaagatg	gggaaagagg	gtgggtgcgg	gtg	ggggtg	94
	GCAGgtgggc	TGAGTGCTAA	ACAGTGATGC	GTTTAACCAG	TCTGGACTGT	CAGGGTGTCA	88
	GCCCTGTGCC	TGACTACACC	GAGGGGTCTC	CTTCCAATAT	5	CCIC	82
	TGCACTCCTG	TGGACATATC	GTCCCAGGAC	AGAGACTCAG	g	agatcct	26
	gaccccaaca	atgtagatga	agggggtgca	tgaagcttta	ບ	aaactgt	70
	tctgggaggt	taccttggct	agagttgagt	aagtggtctc	cttagtgaag	agggcctgca	64
	tcttatggga	tgagttaacg	tactttttt	caaagccctg	ccagttgctc	aggcctct	58
	cttgcttcct	ttetteetet	cttcctttct	ccettatata	r C	ctccctt	52
	tetetteett	cttctttcct	gacggtcttt	tgtagactca	gagttaagag	tggtaca	46
	gcactttatg	ttgtggccca	gggcttaaac	aatttgctct	ttttctttt	ggattcat	40
	ccaaagtgct	cctcggcctc	gatccaccag	ctgaccttgt	tctcaaactc	ccaggct	34
	caccatattg	gacagggttt	ctttagtaga	ttttttacat	tttttttt	cttt	28
	ttttttctt	attcagatca	Jt	ttcatattta	gttatcaata	ttttgtat	22
	tcttgtgtct	cctttgcatt	ct	ctagactagg	taggtttctg	tagacct	16
	acttactcta	tttaaatctc	cttgggtcat	cttagtcact	g	tgttggaa	10
	gtaaatactt	tta	at	u	gaactgttta	tttttctg	04
	gagagctaaa	gtcaagtctg	attgtcaa	ggtgtttgga	accaaaaat	aaaaaacaag	98
	aatgagacaa	caaaaaccaa	gaaaaccaag	aaaaaaaaa	tcaaaaaaaa	gactcttgtc	92

g FIG. 2E

aaagaatccc	tgttgtggca	accttagctt	gcccttttac	ccaccctcat	actcggggca	cttccttccc	TIGGCCICCI	Ggtattacac	tgcaaagcgc	tgtacacaca	ACTGGAGCCT	GGAGCCGGTA	TTTAAAATA	ggaggtattt	ctattacagt	
ccctctcgca	caggctgggg	caatcctttc	gccccaaacg	tctcgtgtat	ctgcctgaga	gcagaccct	GCCCTGGTTT	AGGCAGCACA	agtcacttca	tttcctgttg	GGTAGCCGAG	CATCTGAGGG	CCAAGAAATT	caaatcagaa	tgcatttatt	
ctcccagcat	ctgtttgccc	taggctcagg	actgtgcctg	tcttacccct	cactatgggg	gaggaactct	TGACATCCTA	GCAGATGAGA	accettgtgg	ctgattagcc	GCCCAGCAGA	CAGCCAGAGG	CTTTTAACTG	ctttgttccc	ttagtggtaa	gttgctcc
cttgagaaat	gggtctcact	ctcgaactcc	ggcatgagcc	acggtgctta	gagactgagg	ggcaggtgtt	ccatcgcagG	CGTTCCTTGT	agetteeec	ggccagtttt	GTGAGCTACC	TGTGAGAAGC	ATGCCACTTC	tgttagtcac	tagcaccaat	actccaatgt
tagaatgaag	tttaaagata	tcactgcagc	tgggactgta	ggaagcaaaa	gcctcttctg	agtgcactga	tctctgctct	ACCAGCGTCG	ttcaggcaca	gctgctcctg	CAAAGGGGGT	TCTTGGAGAA	CCTGCTCATT	ATaaaatatg	ttactgttat	tccacacatc
gctaattgat	cccccttt	cgatcatagc	ctcaaagcac	ttggctttta	cccttggctg	ggggtggtgg	aaagcagccc	TTTTGCTGTC	tgaccettte	atgcaaatga	GAAGGGGAAC	AGAGGCTGGA	ACTGTCCTGT	AATATTTATA	gaatttccta	taggaataat
9901	9961	10021	10081	10141	10201	10261	10321	10381	10441	10501	10561	10621	10681	10741	10801	10861

FIG._2F

FIG2A	FIG2B_	FIG2C_	FIG2D	FIG2E	FIG2F
		Ē		Ā	Ħ

FIG._2

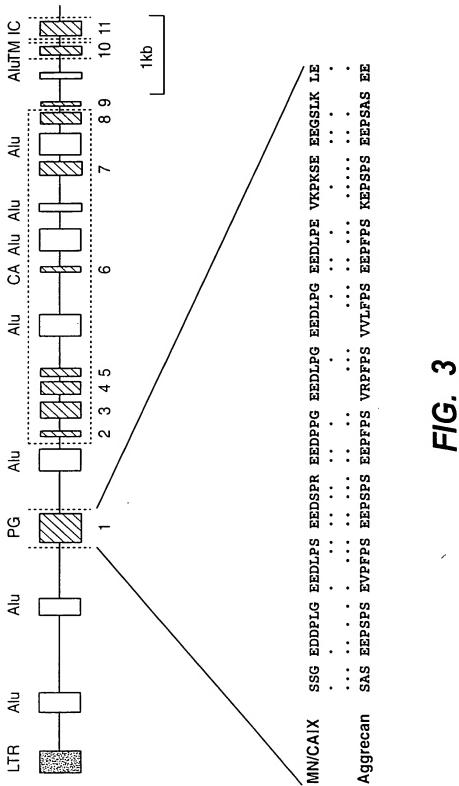


FIG._4A

FIG._4B

Scheme 1

FIG._5

Scheme 2

(For R⁶ or R² Me)

FIG._6